

library of his brother, the late Dr. Thos. B. Wilson. Some of these were already in the possession of the Academy, but the collection contains many valuable works not before in the library, while most of the duplicates are in better condition than the copies on our shelves.

All of which is respectfully submitted.

EDWARD J. NOLAN, *Librarian.*

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## REPORT OF THE CURATORS FOR 1875.

The Curators, in presenting their usual annual report, announce the important fact that the new building, erected for the Academy at the corner of 19th and Race Sts., is so far completed as to be ready for the reception of its collections. Indeed, the removal of the Museum from the building we now occupy was commenced on the 2d of November and was completed the last week. It is proposed shortly to commence the removal of the Library, and the Curators anticipate having our new hall ready for the future meetings of the Academy early in January of the coming year. The removal of the Museum was carried on with unexpected rapidity, but with the necessary care, under the able direction and incessant attention of two of my colleagues, Mr. Tryon and Mr. Parker. Indeed, I feel that the Academy is greatly indebted to these two gentlemen for the successful manner in which they have carried out this responsible charge, and I hope that we may be still able to secure their services for the necessary arrangement of the Museum in our new building.

During the last year an unusual amount of labor was carried on in putting the collections of the Museum in the best condition for study.

The ornithological collection, which, from its enormous size, is the most serious charge of the Curators, has suffered in past years a considerable amount of damage from the attacks of insects. Latterly, much attention has been devoted to it, and we hope hereafter to be able to keep it in better condition. During the last year Dr. James A. Ogden, Mr. Russell Hill, and Miss Sarah P. Monks, have been engaged in arranging the collection. In this time they have identified, labelled, and catalogued 6900 specimens of birds, of about 1300 species comprised in 38 families.

The alcoholic specimens generally of the Museum have been looked over by Mr. Parker.

The alcoholic collection of mollusks, myriapods, spiders, etc., comprising about 500 jars, have been arranged and labelled by Mr. Parker.

All the crustaceans, amounting to upwards of 1050 species, have been identified, neatly arranged, labelled and catalogued by Mr. Parker and Mr. Tryon.

The collection of echinoderms has been properly arranged and labelled by the same gentlemen.

All the specimens received during the year have been deposited in their proper places and labelled.

The Botanical Committee, Messrs. Meehan, Burke, and Redfield, and Miss Bodley and Dr. Leffman, have continued their labors in the arrangement of the Herbarium.

The contributions to the Museum during the year are as follows:—

*Mammals*.—A Giraffe; a Virginia Deer; a Rock Kangaroo, *Petrogale penicillata*; a Porcupine, *Hystrix javanicus*; a young Lion; 2 *Sciurus*; 2 *Pauxi galeata*; *Macacus nemestrinus*; *Cercopithecus sabæus*; and a Sapajou. Presented by the Philadelphia Zoological Society.

A Japanese Dog, from Dr. W. S. W. Ruschenberger; a Howling Monkey, *Myctes*, U. S. of Columbia, from Wm. M. Gabb; a Maryland Marmot, from Dr. Harrison Allen; and a small mammal from Fung Chow, China, from Wm. M. Capp. Eleven human skulls were presented by Dr. William H. Jones, U. S. N.

*Birds*.—*Crax carunculata*, S. America; Red-breasted Pigeon, *Phlogaenas cruenta*; Philippines; *Casarca variegata*, N. Zealand; and *Porphyrio martinica*. Presented by the Philadelphia Zoological Society.

Fifteen specimens, 9 species, of bird skins, mostly from Guaymas and La Paz, and another collection of 28 bird skins, from the Pacific coast. Presented by Dr. Wm. H. Jones, U. S. N.

A Gray Duck, *Chaulelasmus streperus*, from C. W. Matthews, and an Ostrich egg, from S. C. McClure.

*Reptiles, Amphibians, and Fishes*.—An Alligator. Presented by the Philadelphia Zoological Society.

Two small bottles with reptiles; three additional species of reptiles, and 33 specimens of 19 species of fishes, from the Pacific

coast of Mexico, from Acapulco to Guaymas and La Paz. Presented by Dr. Wm. H. Jones, U. S. N.

Five species of reptiles, Cold Springs, N. York, and one reptile, from California. Presented by Sarah P. Monks.

A fine specimen of *Ceratodus Forsteri*, from Queensland. Presented by Dr. John Belisario, of Sydney, Australia, through Dr. McQuillen.

A Bottle-headed Dolphin, *Coryphæna Suerii*, caught five miles off the coast of Atlantic City, N. J., Sep. 7, 1875. Presented by W. R. Bucknell.

An Angel Fish, *Squatina Dumerili*, from Lewes, Delaware. Presented by A. Purvis.

Two species of reptiles and four of fishes, from Chester Co. Presented by Dr. H. Allen.

*Trichiurus lepturus*, from the southeast coast. Presented by John Krider.

*Spelerpes bilineata*. Presented by Gen. Pleasanton.

*Bolesoma olmstedii*, Rancocas Creek, N. J. Presented by Col. T. M. Bryan.

Two snakes from Fung Chow, China. Presented by Wm. M. Capp.

*Mollusks*.—Fifty-one species of marine shells, from the Atlantic coast of Costa Rica; three species, from Aspinwall; three specimens *Ostrea virginica*, from Gulf of Nicoya; and a *Helix* from Genesee Co., N. Y. Presented by William M. Gabb.

Thirty species of shells, from Acapulco, besides three other collections of shells and bryozoans, from Alaska and other localities along the Pacific coast to Mexico. Presented by Dr. Wm. H. Jones, U. S. N.

Seventeen species of land shells from Australia, West Indies, etc., presented by Thomas Bland; and also four additional species, in exchange from the same.

Three cuttle fishes, from China. Presented by Wm. M. Capp.

Twenty-one species of shells, from Florida. Presented by W. W. Calkins.

Eighteen species of shells, from California, presented by Sarah P. Monks; two species *Bulinus* and two of *Thaumastes*, from the Rio Negro and the Amazon, presented by Prof. J. Orton; *Goniobasis potosiensis*, from Missouri, presented by Mrs. Mary P. Harris;

and a small collection of shells, from Bermuda, presented by Mr. Janney.

*Articulates*.—A case containing a fine collection, mainly of lepidoptera, with a few neuroptera, from the coast ranges at Rockingham Bay, northeast coast of Queensland, Australia. Presented by Dr. John Belisario, of Sydney, N. S. Wales, through Dr. McQuillen.

Many specimens of species of crustaceans, besides *Carpilius maculatus*; two species of barnacles; a small collection of isopods and insects. From various localities of the Pacific coast, and presented by Dr. Wm. H. Jones, U. S. N.

A bottle of insects, from Ooromia, Persia. Presented by a missionary, Rev. G. W. Coan, through Mr. D. D. Willard.

Three vials with insects, from Nebraska. Presented by Lieut. W. L. Carpenter, U. S. A.

*Ocypoda rhombea*; several spiders and centipeds; several species of ants; and parasites from a monkey, a field-mouse, a hawk, and a beetle, from Old Harbor, Costa Rica. Presented by W. M. Gabb.

*Libinia canaliculata*, Cape May, N. J., from Rev. R. B. Port; an *Astacus*, Chester Co., from Dr. H. Allen; *Epeira riparia*, Philadelphia, from Miss Withers; a Mole-cricket, California, from Miss Monks; and a wasp's nest, Haddonfield, N. J., from Miss Mary Kirby.

*Radiates and Protozoans*.—A collection of echinoderms, holothurians, ophiurians, and star-fishes; an actinia, a coral, a gorgonia, and several species of aculephs; from the Pacific coast. Presented by Dr. W. H. Jones, U. S. N.

Five species of corals, one star-fish, and five species of sponges, from Bermuda. Presented by Mr. Janney.

Eleven species of corals and an *Echianthus rosaceus*, from Florida. Presented by W. W. Calkins.

A collection of British sponges: *Grantia compressa*, *Isodictya varians*, *I. infundibuliformis*, *Chilina oculata*, and *Halichondria panicea*. Presented by the Liverpool Free Public Museum.

Two species ophiurans and one other echinoderm, from Aspinwall, and a coral from the coast of Costa Rica. Presented by Wm. M. Gabb.

A fine specimen of *Heterocentrotus mammillatus*, from the Pacific. Presented by J. H. Redfield.

*Erechinus chloroticus*, New Zealand. Presented by C. F. Parker.

*Fossils*.—A large collection of tertiary fossils, of St. Domingo, comprising 1340 specimens of mollusks, and 86 specimens of 23 species of corals. Presented by William M. Gabb.

Several collections of fossils from the marl pits near Vincenttown, Pemberton, Ayrestown, and Glassboro, New Jersey, comprising a multitude of specimens of vertebræ, and teeth of sharks of the genera *Lamna*, *Otodus*, *Carcharodon*, *Oxyrhina*, and *Galeocerdo*; also teeth of *Pristis*, *Myliobatis*, and *Enchodus*; the snouts of *Histiophorus* and *Coelorrhynchus*; in addition, fragments of turtle shells, of *Mosasaurus* and other saurian bones, dermal plates, bones and teeth of crocodiles, etc. Specimens also of *Belemnites*, *Ammonites*, *Ostrea*, several gastropods, *Spatangus*, etc. Presented by Col. T. M. Bryan. There were likewise presented by the same gentleman, some fossil fishes, mollusks, and plants, from Colorado.

A small collection of shark teeth and a cetacean rib, from Ashley R., S. C. Presented by S. T. Abert, through Col. Bryan.

A collection of seventy-five fossils, from the vicinity of Lexington, Scott Co., Md., was presented by Dr. W. D. Hutchings.

A collection of forty-four fossils, from California, was presented by Sarah P. Monks.

A collection of teeth and vertebræ of sharks, from Ashley R., S. C., and a collection of post-pliocene fossils, from the coast of Cuba, were presented by Mr. John Ford.

Other small collections and single specimens of fossils were presented by Dr. S. C. De Besy, W. W. Jefferis, J. B. Dillingham, Alfred G. Baker, John M. Hartman, Joseph P. Hazard, C. J. Hardekopf, Joseph Krall and Dr. F. L. Gault.

From the Otago Museum, Dunedin, N. Z., there was received a collection of bones of *Dinornis*, in exchange.

From the Museum of the Jardin des Plantes, Paris, there was also received, in exchange, a collection of casts in plaster, of vertebrate fossils.

*Plants*.—One hundred and eighty-nine species of plants, collected in the Sierra Nevada, California, by Lemmon, were presented by Messrs. John H. Redfield, John S. Haines, and Thomas Meehan.

A collection of Parry's plants of Wyoming and of Southern Utah of 1873-74 was presented by Wm. H. Dougherty.

A collection of plants, from Guadaloupe Island, off Lower California, was presented by John H. Redfield and Wm. M. Canby.

A collection of plants from Vera Cruz, was presented by Chas. Mohr, of Mobile, Ala.; another from California and Nevada, was presented by Dr. J. W. Metcalf; and one of eleven species of algæ, of California, was presented by Miss Sarah P. Monks.

Single botanical specimens were presented by Dr. Robert Bridges, Botanely & Co., G. Schrader, J. S. Lippincott, and Dr. J. L. LeConte.

*Minerals.*—A meteorite, which fell Feb. 12, 1875, near Homestead, Iowa, was presented by C. W. Irish, Iowa City.

A large and magnificent specimen of amethyst, from Thunder Bay, Lake Superior. Presented by W. S. Bissel.

Idocrase, Orange Co., N. Y.; two arkansites, Magnet love, Ark.; martite, Digby Neck, N. Scotia; apatite, Nassau; pyrite, Bannat; and calcite, Cornwall. Presented by C. S. Bement.

A large pebble of limpid quartz, from Siberia. Presented by Joseph Jeanes.

Melanosiderite, chesterlite, jefferisite, and halite, from Chester and Delaware Co's. Presented by W. W. Jefferis.

Native silver and argentite, argentite, and pyrrargyrite, Guanaajuata, Mexico. Presented by Dr. A. B. Carothers, Saltillo, M.

A small collection of minerals from Fritz's Island, near Reading, Pa., and a specimen of samarskite, from Mitchell Co., N. C., were presented by Joseph Willcox.

Other minerals were presented as follows:—

Five specimens of cinnabar, St. John's Mine, Solano Co., Cal., and lignite from Alaska, by Dr. Wm. H. Jones; malachite, from Australia, by Dr. J. Belisario; stilbite on gneiss, Frankford, Pa., by John Ford; arkansite on quartz, by Dr. Beadle; several iron ores from York Co., Pa., and Essex Co., N. Y., by John M. Hartman; fossil wood, Cecil Co., Md., by J. Ryder; agate pebbles, Texas, by Lieut. A. C. Mackley; lignite, Costa Rica, by Wm. M. Gabb; peat, New Jersey, by John Cooper; bog ore, Edgmont, Del. Co., by A. B. Mitchell; limonite with impression of recent snake skin, Carroll Co., Va., by Mr. Huey through Dr. James Darrach; opalized wood, Nebraska, by Swarthmore College; and sulphur, California, by Miss Sarah P. Monks.

*Miscellaneous.*—Tapa cloth, Feejee Is., presented by Dr. John



Belisario; and a collection of bows and arrows, from one of the Pacific Isles, presented by Dr. Wm. H. Jones, U. S. N.

Respectfully submitted by

JOSEPH LEIDY,  
*Chairman of the Curators.*

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## REPORT OF RECORDER OF BIOLOGICAL AND MICROSCOPICAL SECTION, 1875.

In presenting to this Section the annual Report of the Recorder, I am gratified to be able to make it a mere record of scientific research actually accomplished; and believe we have ample cause for mutual felicitation in the fact, that no single meeting throughout the year has passed without its written or oral communication, illustrated in every instance save one by specimens of microscopic work.

At the first meeting in 1875, Dr. J. G. Hunt made a very interesting communication upon the subject of Amplifiers for the microscope, giving a history of the apparatus, and demonstrating the mode of employment and special advantages. At the February meeting, Dr. J. C. Morris read his elaborate report upon  $\frac{1}{25}$  and  $\frac{1}{50}$  objectives, full abstracts of which have been since reprinted in the "Cincinnati Medical News," and in the "London Monthly Microscopical Journal." In March an instructive article on "The misinterpretation of appearances under the microscope," by Mr. Charles Stodder, of Boston, Mass., a correspondent of the Section, was read and afterwards appeared in the columns of the "Phila. Medical Times." At the next meeting, Dr. Carl Seiler produced an important paper on the "Photographic enlargement of microscopic objects," illustrated by numerous photographs taken with an ingenious camera of his own construction, which he also displayed. In May, an exhaustive article on the "Physiological action of hemlock and its alkaloids," was presented by Dr. H. C. Wood, for B. F. Lautenbach, M.D.; and Dr. J. G. Hunt exhibited some of his exquisite preparations, of injected intestinal villi of the rabbit, and Pacinian bodies from the mesentery of the cat, giving minute directions for following his method of manipulation. At the first meeting after the summer vacation, Dr. Hunt showed some sections from the branch of a pear tree affected with "black rot" or "fire blight" which gave